

柑橘上的一種新介殼蟲

陳 方 潔

(四川省農業科學研究所)

一. 前 言

這種介殼蟲，在 1937 年即發現於成都郊外柑橘上，當時分佈面積很小，僅限於附近的華陽、金堂、簡陽等縣，為害也輕，近年漸已成為柑橘之嚴重敵害，且分佈區域，亦逐年擴大。根據它的形態和習性，早已肯定為一新種，由於客觀原因，迄未發表，但近來少數工作同志，已採用了著者初擬的學名，為了符合目前國際動物命名法規定，特專作新種介紹。

二. 柑橘白輪介殼蟲

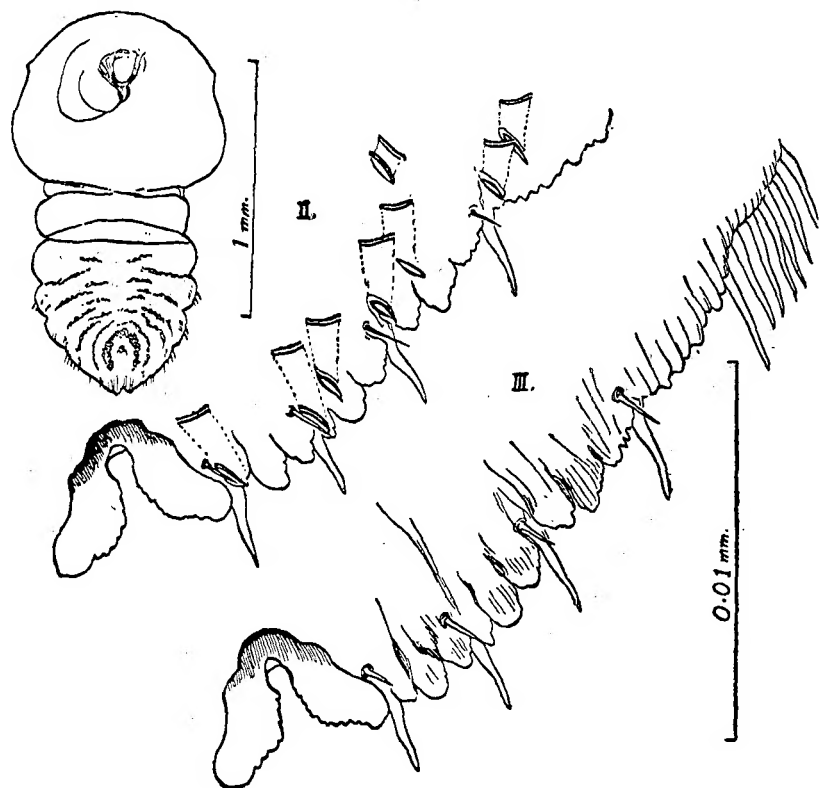
Aulacaspis citri, n. sp.

(一)雌性介殼：圓形或近圓形，徑約 3 毫米，殼薄而稍拱起，色白間雜以塵芥，若蟲所蛻之皮，在介殼中心或接近中心處，一齡蛻灰黃色，二齡蛻淺黃色。

(二)雌成蟲：體長 1.5 毫米，初出時橙黃色，老的暗紫色，頭胸部很大，橫徑大於長徑，前端漸狹，兩肩具角狀突起。觸角退化，有一長毛。前氣門處有氣門周腺孔一羣，後氣門處只有 4 個。腹節兩側突出，前一腹節較後胸節寬，每腹節上均有橫列之背腺孔，其大小與臀板上者相若，臀板前一腹節，有很多側腺及細長側腺刺，後者較臀板上腺刺為短，其他腹節上，亦有稀少的較小的側腺。

(三)臀板：全形寬過於長，背面的許多橫刻紋，肛門距尾端較近，背面兩側各有三列背腺孔，每列有背腺孔 5—17 個，兩側邊緣上，各有緣腺 7 個，圍陰門泌腺孔有 5 羣。正前方一羣有泌腺孔 16—19 個，前側的各有 26—39 個，後側的各有 22—36 個。中葉陷入尾端，僅留其尖端伸出，長而狹，兩中葉內緣分離，基部連接，約呈喇叭狀，有明顯的齒狀刻痕。第二葉每個再分為二，頂端圓滑，在內面的小葉較中葉稍突出。第三葉頗明顯，亦分為二，較第二葉寬。第四葉稍

微發達，仍二分。腺刺相當的長，每邊有 9—15 根，中葉與第二葉間、第二葉與第三葉間、第三葉與第四葉間及第四葉後，各有 1—2 根，基部有 5—7 根。



Aulacaspis citri, sp. nov.

- I. ♀ × 37
 II. 臀板後緣（背面觀）× 500
 III. 臀板後緣（腹面觀）× 500

（四）雄性介殼：瘦而長，兩側幾平行，色白，有 3 條並列之脊，幼蟲蛻在其前端，淡黃色，全長約 0.01 毫米，寬 3.4 微米、雄蟲介殼常羣集一處，其上還有稀疏的捲曲形白蠟毛。

（五）雄成蟲：頭部尾端體側及觸肢等均淺橙黃色，胸部紅黃色，胸背橫帶顏色亦同，翅無色，眼黑色，兩對甚明顯，另 1 對黑點在頭之後側，似為退化複眼之痕跡，觸角端節不膨大，身體極小，長約 0.48 毫米，寬 0.18 毫米，觸角長 0.49 毫米，翅長 0.65 毫米，寬 0.26 毫米，生殖鞘長 0.20 毫米。

（六）寄主：為害甜橙、酸橙（江津枳橈）、檸檬、江橘、柚子、四季橘等。

(七)分佈: 成都、華陽、簡陽、金堂、廣漢、新都、南充、江津、瀘縣、榮昌、宜賓等縣。

(八)標本: 1937 年採得雌蟲甚多, 雄蟲 5 頭均存四川省農業科學研究所植保系標本室。

此蟲散居葉上, 特別好集中於蜘蛛網下及捲葉內, 果實上及小枝上亦多。有蟲處葉果面先起黃斑, 漸擴大以至枯死。繁殖力強, 每雌蟲平均產卵 116 粒, 最多可達 214 粒。若蟲發生期, 噴射松脂合劑或石硫合劑均有確效。

參 考 文 獻

- [1] 張景啟 1928. 中國介殼蟲名錄。
- [2] Clausen, C. P. 1927. The Citrus Insects of Japan. *U.S. Dept. Agr. Tech. Bul.* 15:1-15.
- [3] ———— 1933. The Citrus Insects of Tropical Asia. *U.S.D.A. Cir. No. 266*, pp. 16-7.
- [4] Comstock, J. H. 1916. Report on Scale Insects, *Cornell Univ. Bul.* 572:460-2, 546-55.
- [5] Fernald, M. E. 1903. *Cocc. World.* pp. 233-5.
- [6] Green, E. E. 1930. *Coccidae. Fau. Suma., Bij. Nr. 65*, pp. 202-4.
- [7] Hoffmann, W. E. 1927. *Coccidae from China. Ling. Agr. Rev.* 4(1):70-2, 73-4.
- [8] Kuwana, I. 1927. A List of Coccidae known from China. *Ling. Agr. Rev.* 4(1):70-2.
- [9] ———— 1925. The Diaspinae Coccidae of Japan. Pt. 3, pp. 22-4, 32-3.
- [10] MacGillivray, A. D. 1921. *The Coccidae.* pp. 233-5.
- [11] Maskell, W. M. 1897. On a Collection of Coccidae, Principally from China & Japan. *Ent. Mon. Mag.* 33:239-44.
- [12] Newstead, R. 1900. Monograph of British Coccidae. 1:67-8.
- [13] Shiraki, T. 1934. Insect Pests of Citrus-trees in Formosa. *Jour. Soc. Trop. Agr.* 6(1-4):31-2.
- [14] Silvestri, F. 1920. *Mon. Cocc. Italiane.* pp. 199-210.
- [15] ———— 1928. Preliminary Report on the Citrus Scale Insects of China. *4th. Int. Cong. Ent.* 2:899-904.
- [16] Takahashi, R. 1935. Observation on the Coccidae of Formosa. Pt. V. *Dept. Agr. Gove. Res. Inst. Rep.* 66:10-2.
- [17] ———— 1936. Two interesting Scale insects attacking the Lauraceae in Formosa. *Tran. Nat. Hist. Soc. Form.* 26(149):80-1.
- [18] Wu, C. F. 1935. *Cat. Ins. Sin.* 2:204-6.

A NEW COCCID ATTACKING CITRUS IN SZECHUAN

CHEN, F. G.

*Szechuan Agricultural Research Institute**Aulacaspis citri*, sp. nov.

Female scale: Diameter about 3 mm.; circular or subcircular, rather thin, slightly convex, color white or dirty white; larval exuviae at or near the center, the first exuvia pale yellow, the second exuvia light yellow.

Female body: Length about 1.5 mm.; young adults orange yellow, the older adults purplish brown. Cephalothorax very large, wider than long, narrowing towards the front, but with an eminently blunt protuberance on each side of the shoulder. Antenna each with a long curved seta. Anterior spiracles with a cluster of parastigmatic pores, posterior ones with about 4 pores. Abdominal segments convex laterally, first segment wider than the metathorax, all with transverse rows of dorsal gland orifices which are as large as the dorsal glands of pygidium. The penultimate segments (anterior to the pygidium) with many smaller, lateral glands and some slender lateral gland spines, the latter shorter than those on the pygidium; the preceding segment with few lateral glands smaller.

Pygidium: Somewhat wider than long, with many striae on the dorsum. Anal opening more or less nearer to the apex than to the base. Dorsal gland orifices about 5-17 on each side, arranged in 3 rows. Marginal glands 7 on each side, circumgenital pores in 5 groups; the median group with about 16-19 pores, the anterior laterals with about 26-39, the posterior laterals with 22-36. Median lobes deeply sunk into the apex of the pygidium, only the apices projecting, long, rather narrow, inner margins distinctly separated, parallel at base, then somewhat angularly diverging from each other, strongly serrate; lobes united basally by a chitinous thickening of the apex of the pygidium. The second lobes divided, usually rounded in the apex, the inner lobule more prominent than the median lobes. The third lobes distinct, divided, wider than the second. The fourth lobes slightly developed, also divided. Gland spines moderately long, 9-15 on each side, of which 1-2 outside each median lobe, 1-2 just beyond the outer lobule of 2nd lobe, only 1 beyond the outer lobule of 3rd lobe, the other beyond the outer lobule of 4th lobe and a group of 5-7 on the basal part.

Male scale: Elongate, narrow, nearly parallel-sided, white, tricarinated. The larval skin is at one extremity, light yellow in colour. Length 10μ , width 3.4μ , scales frequently occurring massed in great numbers and these masses are covered with a few loose curled white hairs.

Male: The head, caudal part of the abdomen, sides of the body and limbs are light orange yellow in colour; the thorax reddish yellow, with the band of the same

color and the wings white. Eyes two pairs, distinctly black, another pair of black spots on the sides posterior of the head, these are probably the vestiges of compound eyes. The terminal joints of antennae not enlarged. Measurement of the body as follows:

	Length	Width
Body	475.2 μ	178.2 μ
Antenna	486.1 μ	—
Wing	653.4 μ	257.4 μ
Style	198 μ	—

Host: *Citrus sinensis* Osbeck, *Citrus limon* Burm, *Citrus tangerina* Hort., *Citrus grandis* Osb., *Citrus aurantium* Linn., *C. microcarpa* Bge.

Attacking the leaves, fruits and tender branches, occasionaly inflicting serious damage to the hosts.

Distribution: Chengtu, northern and southern districts of Szechuan.

NOTE: It resembles *Aulacaspis phoebicola* Takahashi, but differs from the latter as follows: (1) All the lobes are quite different in shape; (2) Gland spines and circumgenital pores more numerous; (3) Larger in size.

